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[Navy Medicine Education and Training addresses health and safety with a training change](#)

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June is men's health month, providing Navy Medicine an opportunity to spread awareness of preventable disease and injury among men. Part of Navy Medicine's campaign is communicating to patients that, according to the Centers for Disease Control (CDC), unintentional injury is among the top five causes of death among men. Part of Navy Medicine's solution is providing the proper resources and education to prevent as many injuries as possible.

That's where the operational training arm of Navy Medicine Education and Training Command comes in. A Navy Medicine Operational Training Center (NMOTC) priority is to help eliminate accidents and injuries by providing resources and education to a large portion of our "students," both male and female Navy and Marine Corps pilots and flight crew.

NMOTC's Naval Survival Training Institute (NSTI) is stepping up in a big way by changing how NSTI's Aviation Survival Training Centers (ASTC) train pilots to recognize the symptoms of hypoxia, a condition in which the body is deprived of an adequate supply of oxygen. Though this change is spotlighted for Men's Health Month, this training shift is occurring for the safety, health and well-being of women and men aviators across the Navy and Marine Corps.

The eight ASTCs located across the U.S. have decommissioned the low-pressure chambers, the large, room-sized structures that have been a part of aviation training since 1947. The low-pressure chambers induce hypoxia by reducing the atmospheric pressure and oxygen level. However, physically changing the atmospheric pressure puts students at risk of decompression sickness, which typically occurs with a change in air pressure.

The ASTCs are eliminating this risk and experiencing other benefits by integrating the Reduced Oxygen Breathing Device (ROBD) into training. This is serving as a bridge to the more permanent normobaric hypoxia trainer, where the pressure of the air is not changed.

ROBD training has been around since the early 2000s when it was used in conjunction with the more traditional low-pressure chamber training. ROBD was developed by a Navy Medicine Research and Development, and Navy Medicine Operational Training team. ROBD uses bottled gasses to feed an adjustable oxygen and nitrogen mixture to a pilot's oxygen mask to produce the atmospheric oxygen contents for altitudes up to 34,000 feet.

ROBD benefits over the traditional low-pressure chamber include eliminating the risk of decompression sickness. Capt. Michael Prevost, NSTI Assistant Officer in Charge, said another is portability, which permits context-specific hypoxia training. ROBD is packed up and taken to a fleet simulator where pilots perform aviation-type tasks while experiencing hypoxia.

Typically, when a pilot becomes hypoxic, it can greatly affect his or her ability to fly a plane. Ask a pilot what it feels like and he or she may explain is as "not feeling right" or simply feeling "a bit strange." To put it medically, the signs and symptoms are quite varied but can range from lightheadedness and a tingling sensation to complete unconsciousness.



Capt. Prevost said ROBD provides him and his team a much better way to train aviators for hypoxia.

Low-pressure chambers are expensive to operate and maintain, and they have reached the end of their operational life. By shutting them down, Capt. Prevost said the ASTCs avoid the risk of pushing them structurally.

In decommissioning the giant, steel, low-pressure chambers, the Navy is losing a longtime staple of the aviation training community. In its place is a more mobile and efficient tool. More importantly, ROBD will support Navy Medicine's efforts to prevent disease and injury.

The shift to a less expensive and more efficient and permanent training solution will be complete by early 2017. All pilots will use the ROBD trainer until the full implementation of normobaric hypoxia trainers. Once those trainers are in place, only pilots who fly with masks will continue using the ROBD.

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